Section 2: BULK DIESEL MOBILE FILTRATION UNITS
Bulk Diesel Mobile Filtration Units

Mobile units provide a fuel filtration solution that address the particulate contamination and water removal in an easy to use package. Because of its mobility, it can be deployed in remote sites or moved between different bulk diesel storage tanks on a facility site.

Bulk Diesel Tanks where contaminated diesel fuel is left in a tank, can jeopardize all of the effort that were put in cleaning the fuel prior to filling up the tank. Over time, fuel in bulk diesel storage tanks can ingress particulate and water contamination from the environment.

Water, over time, results in organic growth such as bacteria and/or fungus. Bacteria or fungus can cause effects similar to free water on fuel systems. This includes rust, corrosion or emissions problems. The effects can be accelerated as the fuel ages and the level of acidity and oxidation can be shown with the Total Acid Number TAN (mg KOH/g) Acid Number. These contaminants may also coat the water in fuel sensors in a system and prevent the proper detection of water.

Natural Gas Drilling Site Example

A bulk diesel fuel storage tank on a remote Natural Gas Drilling site, used to fuel the generator was found with heavy sludge buildup. The sludge and dirt caused loss of production (generator not running) and damage to diesel engine components totaling over $100,000 in lost production in one hour.

Due to the severe contamination, the fuel was pumped into another, clean tank by the BDC bulk diesel filter cart and cleaned in a single pass. With this single pass. Particulate and free water were removed in one step. The first stage Bag Filter on the BDC was ideal for the gross removal of microbial bloom/growth, rust and large particulates from the fuel. With the addition of a bag housing, the BDC can handle the high dirt loads often found in on-site service tanks.

After the original tank was emptied, the sludge at the bottom of the tank (pictured) was removed and the tank was thoroughly cleaned to have it ready for the next delivery of fuel. To maintain a clean tank and clean fuel, the BDC is ideal as a kidney loop system that polishes the fuel on a regular basis or can be permanently installed.

Fuel Contamination types:

<table>
<thead>
<tr>
<th>Contamination Type</th>
<th>Sources</th>
<th>Effects</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulates:</td>
<td>Contaminated fuel delivery</td>
<td>Wear and tear of diesel engine components</td>
<td>Fuel Filtration</td>
</tr>
<tr>
<td></td>
<td>Missing tank breather</td>
<td>Premature failure</td>
<td>Periodic tank cleaning/fuel polishing</td>
</tr>
<tr>
<td></td>
<td>Tank corrosion</td>
<td></td>
<td>Add desiccant breathers</td>
</tr>
<tr>
<td></td>
<td>Dirt left from tank installation</td>
<td></td>
<td>Filtration at each stage of fuel movement</td>
</tr>
<tr>
<td>Water:</td>
<td>Contaminated fuel delivery</td>
<td>Engine combustion and/or injector problems</td>
<td>Fuel Filtration</td>
</tr>
<tr>
<td></td>
<td>Condensation</td>
<td>Corrosion</td>
<td>Close any openings on tank</td>
</tr>
<tr>
<td></td>
<td>Leaks and outside influences</td>
<td>Clogged/saturated filters</td>
<td>Periodic tank cleaning/fuel polishing</td>
</tr>
<tr>
<td>Organic Growth:</td>
<td>Generated by presents of water and air</td>
<td>Clogs filters, engine parts</td>
<td>Periodic tank cleaning/fuel polishing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased TAN number (corrosive effect)</td>
<td>Prevent water from entering tank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use desiccant breathers</td>
</tr>
</tbody>
</table>
Bulk Diesel Filter Cart

Application Introduction:
The BDFC is ideal for those wanting to maintain clean fuel in their bulk storage tanks. The new BDFC provides exceptional particulate filtration and continuous water removal with higher flow rates. The GHPF particulate pre-filter and GHCF coalescing water removal filters feature Schroeder Industries’ GeoSeal® patented aftermarket solution, ensuring quality replacement elements are used with every element change. These elements use the fully synthetic Excellement Z-Media® and revolutionary coalescing media to fully protect vital diesel engine components from debris and water.

Features and Benefits
- Designed with integrated particulate removal pre-filtration for maximum coalescing filter element life in the downstream housing
- Routine element change only needed on GHPF particulate filter, keeping operating costs low
- Patented GeoSeal® elements designed to provide consistent quality with the highest single-pass water and particulate removal efficiencies in today’s ultra-low sulfur diesel (ULSD) fuels
- All-aluminum filter housings and plumbing components are fully compatible with diesel and biodiesel
- Sight glass, Y-strainer, and upstream/downstream test points included
- 15’ clear suction hose and rubber discharge hose with cam-and-groove connections and 3’ wands
- At just under 28” wide, this cart will fit through standard doorways
- Electric motor includes 120VAC with resettable overload and 7’ power cord
- Latching, resettable pressure indicators trip at 5 psi before bypass valve cracking, providing early warning to the operator of when to change the filter element

Model no. of filter in photograph is: BDFC11GGZ3CG5VD525

Applications
- **Industri**
- **Mobile Vehicles**
- **Marine**
- **Mining Technology**
- **Agriculture**
- **Power Generation**
- **Common Rail Injector Systems**
- **Fleet**
- **Railroad**
- **Bulk Fuel Filtration**

Markets

**Industri**
- **Mobile Vehicles**
- **Marine**
- **Mining Technology**
- **Agriculture**
- **Power Generation**
- **Common Rail Injector Systems**
- **Fleet**
- **Railroad**
- **Bulk Fuel Filtration**

SCHROEDER INDUSTRIES | FUEL FILTRATION 73
**BDFC**

**Bulk Diesel Filter Cart**

**Filter Housing Specifications**

| Flow Rating: | Electric Motor Option: 14 gpm or 25 gpm (53 L/min or 95 L/min)  
Air Operated Option: 16 gpm or 25 gpm (61 L/min or 95 L/min) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Environment Temperature Range:</td>
<td>-20°F to 104°F (-29°C to 40°C)</td>
</tr>
</tbody>
</table>
| Bypass Indication: | **Particulate Filter**  
Electric Motor: 35 psi (2.4 bar)  
Air Operated: 25 psi (1.7 bar)  
**Coalescing Filter**  
Electric Motor: 35 psi (2.4 bar)  
Air Operated: 15 psi (1.0 bar) |
| Bypass Valve Cracking: | **Particulate Filter**  
Electric Motor: 40 psi (2.8 bar)  
Air Operated: 30 psi (2.1 bar)  
**Coalescing Filter**  
Electric Motor: 40 psi (2.8 bar)  
Air Operated: 20 psi (1.4 bar) |
| Materials of Construction: | **Particulate Filter**  
Head: Cast Aluminum, Anodized  
Element Case: Aluminum, Anodized  
**Coalescing Filter**  
Head: Cast Aluminum, Anodized  
Element Case: Aluminum, Anodized  
Sump: Cast Aluminum, Anodized |
| Weight: | 131 lbs. (59.4 kg) |
| Standard Operating Frequency & Phase: | 60 Hz, Single Phase |
| Full Load Amperage | @ Operating Voltage:  
13.4 A @ 115 VAC  
7.2-6.7 A @ 208-230 VAC |
| Service Factor Amperage | @ Operating Voltage:  
15.2 A @ 115 VAC  
8.1-7.6 A @ 208-230 VAC |

**Dimensions**

Dimensions shown are inches [millimeters] for general information and overall envelope size only. For complete dimensions please contact Schroeder Industries to request a certified print.

Metric dimensions in [].
<table>
<thead>
<tr>
<th>Particulate Elements</th>
<th>DHC</th>
<th>$\beta_1(c) \geq 200$</th>
<th>$\beta_1(c) \geq 1000$</th>
</tr>
</thead>
<tbody>
<tr>
<td>11GGZ1V</td>
<td>172 grams</td>
<td>&lt;4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>11GGZ3V</td>
<td>148 grams</td>
<td>4.6</td>
<td>5.8</td>
</tr>
</tbody>
</table>

### Coalescing Element

<table>
<thead>
<tr>
<th>Coalescing Element</th>
<th>Pressure Side Coalescing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max Flow</td>
</tr>
<tr>
<td>C125GZ5V</td>
<td>25 gpm</td>
</tr>
</tbody>
</table>

Note: Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500 ppm) water injection

**Particulate Element**
- Flow Direction: Outside In
- Element Nominal Dimensions: 5.0" (27 mm) O.D. x 11" (279 mm) long

**Coalescing Element**
- Flow Direction: Inside Out
- Element Nominal Dimensions: 5.0" (27 mm) O.D. x 12" (305 mm) long

Notes

---

SCHROEDER INDUSTRIES | FUEL FILTRATION 75
### How to Build a Valid Model Number for a Schroeder BDFC Supplied with Elements:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDF</td>
<td>C</td>
<td>11GGZ3</td>
<td>CG5</td>
<td>V</td>
<td>D5</td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

= BDFC11GGZ3CG5VD525

### Filter Model Number Selection

- **Filter Series**: BDF
- **Configuration**: C = Filter Cart
- **Particulate Filtration**: D5 = Visual Pop-Up, Manual Reset
- **Coalescing Filtration**: CG5 = C125GZ5V Coalescing Element

### Pump Sizing and Configuration

<table>
<thead>
<tr>
<th>14 gpm 120VAC 60 Hz Single-Phase</th>
<th>25 gpm 120VAC 60 Hz Single-Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>120VAC 60 Hz Single-Phase</td>
<td>25 gpm Air Driven</td>
</tr>
<tr>
<td>25A</td>
<td>16 gpm Air Driven</td>
</tr>
</tbody>
</table>

### NOTES:

- For 50Hz applications, contact factory
- Box 5. Viton® is a registered trademark of DuPont Dow Elastomers
- Box 7. "I" option is only available with electric motor configurations

### Particulate Elements

<table>
<thead>
<tr>
<th>Filter</th>
<th>Particulate Elements</th>
<th>DHC(g)</th>
<th>( \beta_x (c) )</th>
<th>( \beta_{10} (c) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>11GGZ1V</td>
<td>172</td>
<td>&lt;4.0</td>
<td>200</td>
<td>4.2</td>
</tr>
<tr>
<td>11GGZ3V</td>
<td>148</td>
<td>&lt;4.0</td>
<td>1000</td>
<td>4.8</td>
</tr>
</tbody>
</table>

### Coalescing Element

<table>
<thead>
<tr>
<th>Pressure Side Coalescing</th>
<th>Max Flow</th>
<th>Single Pass Water Removal Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>C125GZ5V</td>
<td>25 gpm</td>
<td>≥ 95%</td>
</tr>
</tbody>
</table>

**Note:**

Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500) water injection

- **Particulate Element Flow Direction**: Outside In
- **Element Nominal Dimensions**: 5.0” (27 mm) O.D. x 11” (279 mm) long

- **Coalescing Element Flow Direction**: Inside Out
- **Element Nominal Dimensions**: 5.0” (27 mm) O.D. x 12” (305 mm) long

### Fluid Compatibility

- ULSD15, low sulfur diesel and high sulfur diesel
- Biodiesel blends
- Synthetic diesel and blends
- No. 2 fuel oil and heating oil

**Advanced Fluid Conditioning Solutions®**
**Application Introduction:**
A simple turn-key stationary fuel filtration system

The BDFP provides a simple turn-key stationary fuel filtration system for exceptional fuel transfer, polishing, and dispensing applications. Both filters combine Schroeder’s fully synthetic Z-Media® in a particulate pre-filter, the GHPF, with our patent-pending coalescing water removal filter, the GHCF, to fully protect vital diesel engine components from dirt and water. The BDFP provides premium filtration in a simple system which can easily be integrated into new and existing fuel storage systems.

**Features and Benefits**

- Turn-key coalescing and filtration system, for use as a fuel transfer, polishing, and dispensing solution
- Incorporates high-efficiency particulate and water removal filtration into a stationary mounted system with pump
- Available with either electrical or air operated pump options for more system flexibility
- GHPF and GHCF filter housings use patented GeoSeal® elements
- All-aluminum filter housings are fully compatible with diesel and biodiesel
- Minimal clearance needed for element service, ideal for enclosure installations
- Routine element change only needed on GHPF particulate filter, reducing operating cost
- Patent-pending, three-phase particulate, coalescing and fuel/water separation media technology
- A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today’s ultra-low sulfur diesel (ULSD) fluids
- Protects expensive Tier III and Tier IV engine components against failures caused by particulate and water transferred from the fuel storage tanks to the equipment
- Allows users to achieve or exceed the particulate and water removal specifications of the injection system OEMs

**Markets**

- Industrial
- Mobile Vehicles
- Marine
- Mining Technology
- Agriculture
### Filter Housing Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Particulate Filter</th>
<th>Coalescing Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating: Electric Motor</td>
<td>14 gpm or 25 gpm</td>
<td></td>
</tr>
<tr>
<td>Air Operated</td>
<td>16 or 25 gpm</td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature Range:</td>
<td>32°F to 104°F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0°C to 40°C)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard; -20°F to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>140°F (-29°C to 40°C)</td>
<td></td>
</tr>
<tr>
<td>Bypass Valve Cracking:</td>
<td>Electric Motor</td>
<td>Electric Motor</td>
</tr>
<tr>
<td></td>
<td>40 psi (2.8 bar)</td>
<td>40 psi (2.8 bar)</td>
</tr>
<tr>
<td></td>
<td>Air Operated</td>
<td>Air Operated</td>
</tr>
<tr>
<td></td>
<td>30 psi (2.1 bar)</td>
<td>20 psi (1.4 bar)</td>
</tr>
<tr>
<td>Materials of Construction:</td>
<td>Porting Head:</td>
<td>Porting Head:</td>
</tr>
<tr>
<td></td>
<td>Cast Aluminum, Anodized</td>
<td>Cast Aluminum, Anodized</td>
</tr>
<tr>
<td></td>
<td>Element Bowl:</td>
<td>Element Bowl:</td>
</tr>
<tr>
<td></td>
<td>Aluminum, Anodized</td>
<td>Aluminum, Anodized</td>
</tr>
<tr>
<td>Weight:</td>
<td>130 - 150 lbs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(59 - 68 kg)</td>
<td></td>
</tr>
<tr>
<td>Element Change Clearance:</td>
<td>GHFP: 2&quot; (51 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GHCF: 4&quot; (102 mm)</td>
<td></td>
</tr>
<tr>
<td>Operating Frequency:</td>
<td>60 Hz</td>
<td></td>
</tr>
<tr>
<td>Operating Phase:</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>Full Load Amperage</td>
<td>13.4 A @ 115 VAC</td>
<td></td>
</tr>
<tr>
<td>@ Operating Voltage:</td>
<td>7.2-6.7 A @ 208-230 VAC</td>
<td></td>
</tr>
<tr>
<td>Service Factor Amperage</td>
<td>15.2 A @ 115 VAC</td>
<td></td>
</tr>
<tr>
<td>@ Operating Voltage:</td>
<td>8.1-7.6 A @ 208-230 VAC</td>
<td></td>
</tr>
</tbody>
</table>

### Electric Motor Option

- **Flow Rating:** Electric Motor: 14 gpm or 25 gpm (53 or 95 L/min)
- **Ambient Temperature Range:** 32°F to 104°F (0°C to 40°C) Standard; -20°F to 140°F (-29°C to 40°C) Heater Option
- **Bypass Valve Cracking:** Electric Motor: 40 psi (2.8 bar)
  - Air Operated: 30 psi (2.1 bar)
- **Material of Construction:** Porting Head: Cast Aluminum, Anodized
  - Element Bowl: Aluminum, Anodized
- **Weight:** 130 - 150 lbs. (59 - 68 kg)
- **Element Change Clearance:** GHFP: 2" (51 mm)
  - GHCF: 4" (102 mm)
- **Operating Frequency:** 60 Hz
- **Operating Phase:** Single
- **Full Load Amperage:** 13.4 A @ 115 VAC
- **@ Operating Voltage:** 7.2-6.7 A @ 208-230 VAC
- **Service Factor Amperage:** 15.2 A @ 115 VAC
- **@ Operating Voltage:** 8.1-7.6 A @ 208-230 VAC

---

*Elements sold with the filter system*
Bulk Diesel Filtration Panel

Filtration Ratio per ISO 16889
Using APC calibrated per ISO 11171

<table>
<thead>
<tr>
<th>Particulate Elements</th>
<th>DHC(g)</th>
<th>$\beta_1 (c) \geq 200$</th>
<th>$\beta_2 (c) \geq 1000$</th>
</tr>
</thead>
<tbody>
<tr>
<td>11GGZ1V</td>
<td>172</td>
<td>&lt;4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>11GGZ3V</td>
<td>148</td>
<td>&lt;4.0</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Coalescing Element

<table>
<thead>
<tr>
<th>Pressure Side Coalescing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Flow</td>
</tr>
<tr>
<td>Single Pass Water Removal Efficiency</td>
</tr>
<tr>
<td>C125GZ5V</td>
</tr>
</tbody>
</table>

Note:
Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500 ppm) water injection

Particulate Element
Flow Direction: Outside In
Element Nominal Dimensions: 5.0" (27 mm) O.D. x 11" (279 mm) long

Coalescing Element
Flow Direction: Inside Out
Element Nominal Dimensions: 5.0" (27 mm) O.D. x 12" (305 mm) long

Notes

**Bulk Diesel Filtration Panel**

**How to Build a Valid Model Number for a Schroeder BDFP Supplied with Elements:**

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOX 5</td>
<td>BOX 6</td>
<td>BOX 7</td>
<td>BOX 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seal Material</td>
<td>Dirt Alarm*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V = Viton®</td>
<td>D5 = Visual Pop-up, Manual Reset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOX 3</td>
<td>Particulate Filtration</td>
<td>Coalescing Filtration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11GGZ1V = 1 µm</td>
<td>11GGZ3V = 3 µm</td>
<td>CG5 = C125GZ5V Coalescing Element</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Filter Model Number Selection**

- **Options**
  - **Omit** = Sight Glass (standard)
  - **U** = Downstream Test point
  - **T** = Water-In-Fuel (WIF) sensor only
  - **I** = WIF sensor w/ remote mount light indicator
  - **H** = Coalescing sump heater
  - **S5** = 5 gal. sump tank*
  - **S20** = 20 gal. sump tank*
  - **AWD5** = Auto. water drain w/ 5 gal. remote tank*
  - **AWD20** = Auto. water drain w/ 20 gal. remote tank*

*only to be used in applications above 32°F (0°C)

**Particulate Elements**

<table>
<thead>
<tr>
<th>Particulate Elements</th>
<th>DHC(g)</th>
<th>β₁(c) ≥ 200</th>
<th>β₂(c) ≥ 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>11GGZ1V</td>
<td>172</td>
<td>&lt;4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>11GGZ3V</td>
<td>148</td>
<td>&lt;4.0</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Coalescing Element**

- **Max Flow**
  - C125GZ5V = 25 gpm

- **Single Pass Water Removal Efficiency**
  - ≥ 95%

**NOTES:**
- For configurations not listed, please contact factory.
- Only box that will allow a combination of options.

**Fluid Compatibility**

- **Fuel Oils**
  - ULSD15, low sulfur diesel and high sulfur diesel
  - Biodiesel blends
  - Synthetic diesel and blends
  - No. 2 fuel oil and heating oil

**How to Build a Valid Model Number for a Schroeder BDFP Supplied with Elements:**

Example: **NOTE:** One option per box

- **BOX 1**: BDF
- **BOX 2**: P
- **BOX 3**: 11GGZ3
- **BOX 4**: CG5
- **BOX 5**: V
- **BOX 6**: D5
- **BOX 7**: 14 = 14 gpm 120VAC 60Hz Single-Phase

**Example Model Number:**

BDFP11GGZ3CG5VD514

**Filtration Ratio per ISO 16889**

Using APC calibrated per ISO 11171

Note: Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500) water injection

**Particulate Element**

- **Flow Direction**: Outside In
- **Element Nominal Dimensions**: 5.0” (27 mm) O.D. x 11” (279 mm) long

**Coalescing Element**

- **Flow Direction**: Inside Out
- **Element Nominal Dimensions**: 5.0” (27 mm) O.D. x 12” (305 mm) long

**Viton®** is a registered trademark of DuPont Dow Elastomers.
Applications

Application Introduction:
The Reason for Better Bulk Fuel Filtration
The BDC provides exceptional single pass or kidney loop diesel particulate filtration and continuous water removal. All 3 filters combine Schroeder’s fully synthetic media and patent-pending fuel water separation technology. The BDC is ideal for fuel maintenance operations.

Features and Benefits

■ Great for kidney loop clean-up and single pass transfer of diesel fuel in larger storage tanks
■ Incorporates a bag element pre-filter, available from 1 to 200 micron, for gross removal of microbial bloom contamination and rust
■ Fuel and water separation media technology in a three-phase element construction for high efficiency, single-pass removal of emulsified and free-water in Ultra-low Sulfur Diesel (ULSD) and biodiesel fuels
■ Designed because prior generation coalescing methods no longer provide high-efficiency separation in ULSD and biodiesel
■ Real time fuel condition monitoring can be achieved while using the supplied test points and one of our contamination sensing products
■ Pump motor is 115VAC with re-settable overload and 7’ power cord for 25 gpm models and available as 220V Single Phase, 230V Three Phase, or 460V Three Phase for 70 gpm models
■ Helps protect expensive, vital engine components against failures caused by contaminated fuel

Markets

Model no. of filter in photograph is: BDC39QPLZ3VAVM
**Bulk Diesel Cart**

**Flow Rating:** Up to 25 gpm (95 L/min) or 70 gpm (265 L/min) for ULSD15 & biodiesel blends

**Temperature Range:** 32°F to 150°F (0°C to 66°C) standard and with AWD option
-20°F to 150°F (-29°C to 66°C) with heater option

**Bypass Indication:**
- **Particulate Filter**: Particulate: 15 psi (1.03 bar)
- **Coalescing Filter**: Coalescing: 25 psi (1.7 bar)

**Bypass Valve Cracking:**
- **Particulate Filter**: Particulate: 20 psi (1.37 bar)
- **Coalescing Filter**: Coalescing: 30 psi (2 bar)

**Materials of Construction:**
- Porting Base: Anodized Aluminum
- Cap: Plated Steel
- Bag Housing: 304 Stainless Steel
- Particulate Filter Housing: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)
- Coalescing Filter Housing: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)

**Weight:**
- 25 gpm model - 785 lbs. (356 kg), 70 gpm model - contact factory

**Element Change Clearance:** 33.8” (858 mm)

**Operating Frequency**: 60 Hz

**Operating Phase**: Single

**Full Load Amperage @ Operating Voltage**: 13.4 A @ 115 VAC
- 7.2-6.7 A @ 208-230 VAC

**Service Factor Amperage @ Operating Voltage**: 15.2 A @ 115 VAC
- 8.1-7.6 A @ 208-230 VAC

*For 25 gpm models only. For electrical on 70 gpm models, Contact Factory.

---

Metric dimensions in ( ).
Dimensions shown are inches [millimeters] for general information and overall envelope size only.
For complete dimensions please contact Schroeder Industries to request a certified print.
Bulk Diesel Cart

<table>
<thead>
<tr>
<th>Particulate Elements</th>
<th>DHC</th>
<th>$\beta_x$ (c) $\geq$ 200</th>
<th>$\beta_x$ (c) $\geq$ 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>39QPMLZ1V</td>
<td>1485 grams</td>
<td>&lt;4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>39QPMLZ3V</td>
<td>1525 grams</td>
<td>&lt;4.0</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Coalescing Element

Flow Direction: Inside Out
Element Nominal Dimensions: 6.4" (163 mm) O.D. x 39.4" (1001 mm) long

Particulate Element

Flow Direction: Outside In
Element Nominal Dimensions: 6.0" (150 mm) O.D. x 37.8" (960 mm) long

Note: Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500 ppm) water injection

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Micron Rating</th>
<th>Elements Per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>C396ZSV</td>
<td>Coalescing Element</td>
<td>5 µm</td>
<td>1</td>
</tr>
<tr>
<td>39QPMLZ1V</td>
<td>Particulate Element</td>
<td>1 µm</td>
<td>1</td>
</tr>
<tr>
<td>39QPMLZ3V</td>
<td>Particulate Element</td>
<td>3 µm</td>
<td>1</td>
</tr>
<tr>
<td>PEF5P2PH</td>
<td>Bag Element</td>
<td>5 µm</td>
<td>50</td>
</tr>
<tr>
<td>PEF2SP2PH</td>
<td>Bag Element</td>
<td>25 µm</td>
<td>50</td>
</tr>
<tr>
<td>PEF50P2PH</td>
<td>Bag Element</td>
<td>50 µm</td>
<td>50</td>
</tr>
<tr>
<td>PEF100P2PH</td>
<td>Bag Element</td>
<td>100 µm</td>
<td>50</td>
</tr>
</tbody>
</table>

Filtration Ratio per ISO 16889
Using APC calibrated per ISO 11171

Particulate and Coalescing Elements Sold with Cart

Advanced Fluid Conditioning Solutions®
## Bulk Diesel Cart

**Example:**
NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDC</td>
<td>39QPMLZ3</td>
<td>V</td>
<td>A</td>
<td>VM</td>
<td></td>
</tr>
</tbody>
</table>

\[ \text{Box 3. Viton® is a registered trademark of DuPont Dow Elastomers} \]

### Filter Model Number Selection

**Box 1**
- **Filter Series:** BDC

**Box 2**
- **Particulate Element Micron Rating:**
  - 39QPMLZ1 = 1 µm
  - 39QPMLZ3 = 3 µm

**Box 3**
- **Housing Seal Material:** V = Viton®

**Box 4**
- **Bag Element Micron Rating:**
  - A = 5 µm
  - B = 25 µm
  - C = 50 µm
  - D = 100 µm

### Dirt Alarm® Options
- VM = Visual pop-up w/ Manual Reset
- Omit = None (standard)
- H = Sump Heater
- AW = Automatic Water Drain 5 gal Tank w/ Failsafe
- 70A = 70 gpm 230VAC Single Phase 60 Hz
- 70B = 70 gpm 230VAC Three Phase 60 Hz
- 70C = 70 gpm 460VAC Three Phase 60 Hz

### Notes:
- Optional AWD is for use only >32°F (0°C)
- For 50Hz applications, contact factory
- Box 3. Viton® is a registered trademark of DuPont Dow Elastomers

### Fluid Compatibility

**Fuel Oils**
- ULSD15, low sulfur diesel and high sulfur diesel
- Biodiesel blends
- Synthetic diesel and blends
- No. 2 fuel oil and heating oil

**Flotation Ratio per ISO 16889**
- Using APC calibrated per ISO 11171

<table>
<thead>
<tr>
<th>Particulate Elements</th>
<th>DHC</th>
<th>( \beta_x (c) \geq 200 )</th>
<th>( \beta_x (c) \geq 1000 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>39QPMLZ1V</td>
<td>1485 grams</td>
<td>&lt;4.0</td>
<td>4.2</td>
</tr>
<tr>
<td>39QPMLZ3V</td>
<td>1525 grams</td>
<td>&lt;4.0</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Coalescing Element**
- **Pressure Side Coalescing**
  - Max Flow: 70 gpm
  - Single Pass Water Removal Efficiency: > 99.5%

**Note:**
- Based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500 ppm) water injection

**Element Part Number Selection**

**Box 5**
- **Dirt Alarm**:
  - VM = Visual pop-up w/ Manual Reset

**Box 6**
- **Options**
  - Omit = None (standard)
  - H = Sump Heater
  - AW = Automatic Water Drain 5 gal Tank w/ Failsafe
  - 70A = 70 gpm 230VAC Single Phase 60 Hz
  - 70B = 70 gpm 230VAC Three Phase 60 Hz
  - 70C = 70 gpm 460VAC Three Phase 60 Hz

---

Highlighted product eligible for **quickDelivery**